

REMARKS

§ 112 Rejections

Claims 1-9 were rejected under 35 U.S.C. § 112, second paragraph. Applicant has amended claim 1 by adding the appropriate text which now makes explicitly clear which element performs the actions of "allocating a plurality of instances" and "receiving a request". Support for the amendments may be found in the description of FIG. 2 on p. 13.

§ 102(e) Rejections

Claims 10-15 and 25-30 were rejected under 35 U.S.C. § 102(e) as being anticipated by US Patent Application 2002/0184392A1 to Parthasarathy (hereinafter Parthasarathy). The Examiner's rejection is respectfully traversed.

Parthasarathy's application deals with a methodology and mechanism for remote key validation for NGIO/Infiniband applications. His methodology and mechanism have nothing to do with "doorbells" as defined and used in the present invention. The use of the term "doorbell" in his specification is always given in the context of a "doorbell manager" element or function, and reflects a totally common meaning and use, as described for example in the Infiniband standard. The first mention of a "doorbell manager" (not even shown) in paragraph 0077 makes it absolutely clear that its function is a standard one of keeping track of the number of outstanding work requests.

Paragraph 0074 in Parthasarathy describes a Translation and Protection Table (TPT) and its function. A TPT (defined in the Infiniband standard) is part of the mechanism used to validate access to memory, done by a device on behalf of a process while executing a work queue element (WQE). In other words, this is part of an execution process, not part of a submission of WQEs to the device process, which is the part covered by the claims of the present invention.

In the method for controlling access by a process on a host device to a communication network of the present invention, each process has a single doorbell

address through which it can access a plurality of instances (i.e. queue pairs or QP, also referred to as "work QPs" or WQPs, see specification p. 4), while still maintaining protection between processes. Per claim 10, the inventive steps include allocating to a process a plurality of instances (WQPs) on a channel adapter and assigning to the process a single doorbell address on the adapter for use in accessing any pair of the plurality of instances (WQPs). In other words, claim 10 refers to allowing the process to control a plurality of QPs through a single doorbell address. Parthasarathy does not do anything of the sort. His method uses the standard control by a process of a single instance (WQP) through a respective doorbell address. The cited paragraphs 0074 and 0088 do not, in any way, recite "assigning to the process a single doorbell address on the adapter for use in accessing any of the plurality of the pairs of work queues" .

Since Parthasarathy does not disclose the assigning step of the present invention, he cannot anticipate claim 10. Moreover, he cannot even render claim 1 obvious. Applicant respectfully submits that claim 10 is therefore patentable. Claims 11-15 depend on claim 10 and include all its limitations, and are therefore also patentable.

The rejection of claims 25-30 is for the same reasons as for claims 10-15. Applicant respectfully submits that Parthasarathy does not disclose a channel adapter comprising a plurality of pairs of work queues (WQPs) for allocation to a process on the host device and a single doorbell address in an address space of the host device for assignment to the process for use in addressing any of the plurality of pairs of WQs. Parthasarathy discloses a channel adapter in which each doorbell address is used for assignment of a single WQP, as common practice. Therefore, Parthasarathy can neither anticipate nor even render obvious claim 25 and its dependent claims 26-30. Applicant respectfully submits that claims 25-30 are therefore patentable.

§ 103(a) Rejections

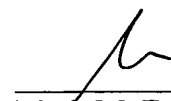
The Examiner has rejected claims 1-9 and 16-24 under 35 U.S.C. § 103(a) as being unpatentable over Parthasarathy (US Patent Application 2002/0184392A1) in view of White (US 6,058,425). The Examiner states that Parthasarathy fails to

explicitly teach allocating a plurality of instances (WQPs) of a communications service on the network, to be provided via the adapter, to at least some of the processes on the host device, such that each of the instances is allocated to a particular one of the processes, but that such allocating is taught by White. The Examiner's rejection is respectfully traversed.

White's patent deals with TCP/IP "instances", which are instances of a protocol stack, not WQPs. White's "TCP/IP instances" have nothing to do with WQPs, so he cannot teach the "allocating the plurality of pairs of work queues .." step in claim 1. Since as argued above, Parthasarathy's patent deals with the execution stages of a process, and White's patent deals with non-related TCP/IP issues, the combination of Parthasarathy and White cannot render claim 1 obvious. Applicant respectfully submits that claim 1 is therefore patentable. Claims 2-9 depend on claim 1 and include all its limitations, and are therefore also patentable.

Similarly, the Examiner uses White's teaching of multiple TCP/IP instances operating with agents/adapter in combination with Parthasarathy's teaching as reasons for the rejection of claims 16-24. As explained above, TCP/IP instances are totally unconnected with, and totally irrelevant to WQPs (instances) of the present invention, a plurality of which can be controlled through a single doorbell address by a given process. Thus, the combination of Parthasarathy and White cannot render claim independent claim 16 and its dependent claims 17-24 obvious. Applicant respectfully submits that claims 16-24 are therefore patentable.

Respectfully submitted,



Mark M. Friedman
Attorney for Applicant
Registration No. 33,883

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